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TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	10/088,247	
	Filing Date	July 26, 2002	
	First Named Inventor	Astrid KLEEN	
	Art Unit	1751	
	Examiner Name	Eisa B. Elhilo	
Total Number of Pages in This Submission	12	Attorney Docket Number	H 3609 PCT/US

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PATENT
Docket No. H 3609 PCT/US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Kleen et al.
Appl. No. : 10/088,247
Filed : July 26, 2002
Grp./A.U. : 1751
Examiner : Eisa B. Elhilo
Customer No.: 00423
Confirm No.: 9303
Title: METHOD FOR COLORING KERATIN FIBERS

Mail Stop Appeal Brief - Patents
Commissioner of Patents
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APPLICANTS' APPEAL BRIEF

Applicants appeal under 37 C.F.R. § 1.192(a) from the Final Office Action of September 16, 2004. A Notice of Appeal and payment of the appeal fee under 37 C.F.R. § 1.17(b) was timely filed on December 15, 2004.

I. Real Party In Interest

The real party in interest in this appeal is the assignee, Henkel Kommanditgesellschaft auf Aktien (Henkel KGaA).

II. Related Appeals and Interferences

There are no related appeals or interferences known to applicants, assignee, or their legal representatives that will affect or be affected by or that have a bearing on this appeal.

III. Status of the Claims

The claims on appeal are 18-33. Claims 34-36 have been allowed. Claims 18-28 and 30-33 are under final rejection and appear in the Appendix. Claim 29 is objected to and also appears in the Appendix.

IV. Status of Amendments

There are no un-entered amendments.

V. Summary of Invention

The present invention relates to the coloring of hair and specifically to increasing the color-fastness of the dyes by use of an enzyme containing hair colorant formulation and its method of use.

It is highly desirable to retain the original coloration with respect to shade and/or intensity after the hair is exposed to repeated contact with water-based preparations such as surfactant-containing formulations like shampoos.

The present invention comprises a process for coloring keratin fibers with dyes and/or dye precursors in which (A)

at least one enzyme of the transglutaminase type and (B) at least one active substance with substrate activity for the enzyme are applied to the fibers. (Page 3, line 7 to page 3, line 28, of the specification, as filed).

VI. Grounds of Rejection

Claims 18, 20-25 and 33 are rejected under 35 USC 103(a) as being unpatentable over Bernard et al. (U.S. 6,274,364).

Claims 19, 26-28 and 30-32 are rejected under 35 USC 103(a) as being unpatentable over Bernard et al. in view of McDevitt et al. (U.S. 6,051,033).

VII. Argument

Bernard et al. disclose treatments for skin. Specifically, these treatments are directed at reducing intercorneocyte cohesion to ultimately facilitate the desquamation of the skin (col. 1, lines 19-20). However, there is no disclosure of formulations or methods for the treatment of hair.

Bernard et al. mention transglutaminase activity but only within the context of treating skin (col. 7, lines 4-16). They disclose that their skin treatment formulations may be co-formulated with a variety of different cosmetic treatments. However, even though shampoos, dyeing formulations and hair restructuring lotions are identified within the reference (col. 8, lines 15-24), this is done merely for the purpose of showing that these skin treatment

compositions be formulated into various other types of compositions.

Bernard et al. disclose that their skin treatment formulations are capable of being blended with other cosmetic treatments, such as hair care formulations. However, they do not disclose that their formulations may be used to *treat* hair. It is respectfully submitted that one skilled in the art of hair treatment formulations would not have sought a solution to the problem of improving the color-fastness of hair colorants from the disclosure of this patent.

The Examiner asserts that McDevitt et al. is from the "analogous art of hair treatment formulations". Appellants respectfully take issue with this assertion. First, as stated hereinabove, it is Appellants' position that Bernard et al. do not disclose or teach hair treatment formulations and their methods of use. Further, the disclosure of McDevitt et al. is not directed specifically to the treatment of hair. It relates to methods for treating wool fibers for the purpose of improving shrink resistance, handling, softness and other characteristics that specifically relate to wool products.

The objective of the formulations and methods of McDevitt et al. is to impart desirable characteristics to wool used in clothing and the like. The wool fibers are not treated while on the host animal. Rather, the formulations and methods of this reference are directed to the treatment of bulk fibers. McDevitt et al. do not

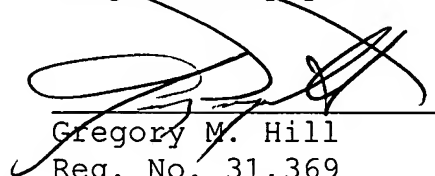
disclose that their formulations and methods may be used to color growing hair on the heads of human beings.

Appellants respectfully submit that it would not have been obvious to one skilled in the art of human hair coloring to have combined a disclosure dealing with the treatment of skin (Bernard et al.) and a disclosure directed at preventing shrinkage in bulk wool fibers (McDevitt et al.). There is clearly no motivation from these references to combine them in such a manner to have resulted in Appellant's claimed invention.

CONCLUSION

For the reasons stated above, the Examiner's final rejection of claims 18-28 and 30-33 should be reversed. The Commissioner is hereby authorized to charge the Appeal Brief Fee of \$500.00 to Deposit Account 01-1250. Order No. 05-0060. Should any fees be due for entry and consideration of this Brief that have not been accounted for, the Commissioner is authorized to charge them to Deposit Account No. 01-1250.

Respectfully yours,



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VIII. APPENDIX

1.-17. (Canceled)

18. (Previously Presented) A process for coloring keratin fibers comprising applying to keratin fibers

(a) at least one colorant comprising at least one dye or dye precursor, or combinations thereof;

(b) at least one enzyme having transglutaminase activity; and

(c) at least one active substance having substrate activity for the enzyme having transglutaminase activity.

19. (Previously Presented) The process of claim 18 wherein the enzyme having transglutaminase activity comprises a calcium-independent transglutaminase.

20. (Previously Presented) The process of claim 18 wherein the active substance having substrate activity comprises at least one protein or protein hydrolyzate, or combinations thereof.

21. (Previously Presented) The process of claim 20 wherein the active substance having substrate activity comprises casein, soya protein or wheat protein, or combinations thereof.

22. (Previously Presented) The process of claim 18 wherein the active substance having substrate activity comprises a substance synthetically functionalized with an $\text{H}_2\text{N}-\text{R}$ group or an $\text{H}_2\text{N}-(\text{CO})-\text{R}'$ group, wherein R and R' represent an unbranched C_{1-8} alkylene group.

23. (Previously Presented) The process of claim 22 wherein the synthetically functionalized substance has at least one $\text{H}_2\text{N}-(\text{CH}_2)_4$ group.

24. (Previously Presented) The process of claim 22 wherein the synthetically functionalized substance has at least one $\text{H}_2\text{N}-(\text{CO})-\text{CH}_2-\text{CH}_2$ group.

25. (Previously Presented) The process of claim 18 wherein the colorant is applied to the keratin fibers, and then subsequently the enzyme having transglutaminase activity and the active substance having substrate activity are applied as a single composition to the keratin fibers.

26. (Previously Presented) The process of claim 18 further comprising rinsing the enzyme having transglutaminase activity from the keratin fibers after a contact time of 3 minutes to 120 minutes.

27. (Previously Presented) The process of claim 18 further comprising pretreating the keratin fibers with at least one pretreatment agent before applying the colorant, the enzyme having transglutaminase activity and the active substance having substrate activity.

28. (Previously Presented) The process of claim 27 wherein the pretreatment agent comprises an oxidizing agent.

29. (Previously Presented) The process of claim 27 wherein the pretreatment agent comprises a reducing agent.

30. (Previously Presented) The process of claim 27 wherein the pretreatment agent comprises an enzyme different from the enzyme having transglutaminase activity.

31. (Previously Presented) The process of claim 18 wherein the colorant, the enzyme having transglutaminase activity, and the active substance having substrate activity are applied simultaneously, or successively in any order.

32. (Previously Presented) The process of claim 18 wherein (i) the colorant and the enzyme having transglutaminase activity are applied to the keratin fibers in a single composition, (ii) the colorant and the active substance having substrate activity are applied to the keratin fibers in a single composition, or (iii) the active substance having substrate activity and the enzyme having transglutaminase activity are applied to the keratin fibers in a single composition.

33. (Previously Presented) A method for improving washing fastness of colored keratin fibers comprising applying to keratin fibers that have been, are being, or will be colored:

(a) at least one enzyme having transglutaminase activity; and

(b) at least one active substance having substrate activity for the enzyme having transglutaminase activity.

34. (Previously Presented) A multi-part kit for coloring keratin fibers comprising:

(a) a coloring composition comprising at least one colorant and at least one active substance having substrate activity to an enzyme having transglutaminase activity; and

(b) a second composition comprising at least one enzyme having transglutaminase activity.

35. (Previously Presented) A multi-part kit for coloring keratin fibers comprising:

(a) a coloring composition comprising at least one colorant and at least one enzyme having transglutaminase activity; and

(b) a second composition comprising at least one active substance having substrate activity to the enzyme.

36. (Previously Presented) A multi-part kit for coloring keratin fibers comprising:

(a) a coloring composition comprising at least one colorant;

(b) a second composition comprising at least one active substance having substrate activity to an enzyme having transglutaminase activity; and

(c) a third composition comprising at least one enzyme having transglutaminase activity.

IX. EVIDENCE APPENDIX

No evidence is provided.

X. RELATED PROCEEDINGS APPENDIX

There are no relevant judicial or administrative
decisions to provide.